

Reserve Advisory Council  
MARCH 15, 2018

STATE OF HAWAII, DEPARTMENT OF LAND AND NATURAL RESOURCES,  
DIVISION OF AQUATIC RESOURCES

1. FISHERIES

BOTTOMFISH FISHERIES

Staff from the Division of Aquatic Resources (DAR) and Western Pacific Fisheries Management Council (WesPac) are working together to design a study to determine the effectiveness of Bottomfish Restricted Fishing Areas (BRFAs) on maintaining the sustainability of the fishery in Hawaii. Results of the latest stock assessments will be considered in regulatory decision-making along with improvements in the ability DAR and WesPac to monitor catch-per-unit-effort CPUE and other parameters used to measure the health of the fishery going forward.

PELAGIC FISHERIES

No report

PRECIOUS CORALS

Staff from DAR has participated in WesPac's process to refine precious corals essential fish habitat.

2. RESOURCE PROTECTION

MARINE PROTECTED AREAS (MPAs)

Plans are underway as part of the "30 x 30 Initiative" (to effectively manage 30% of the coastline around the Main Hawaiian Islands by 2030) to establish new marine managed areas at high priority sites to address coral bleaching, improve fish stocks, and to address other aquatic resource management issues. A Steering Committee has been formed to advise DAR through this process. A final 30 x 30 plan should be finished by the end of 2018. Rulemaking to formally establish the MPA will follow.

#### MARINE LIFE CONSERVATION DISTRICTS (MLCDs)

MLCDs and control sites are surveyed for fish and habitat. Routinely the fish surveys are conducted two to three times a year. During this period, five of the 11 MLCDs were surveyed. Abundance of fish was measured using multiple 25 meter transects at each site. No benthic surveys were conducted for this reporting period.

#### SIZE LIMITS & BAG LIMITS

No report. Legislation was introduced during the 2018 Session to eliminate the Statutory prohibition on the take of female Kona crabs and lobster in favor of regulating these species by rules, which provide more flexibility. The measure was not heard in the Judiciary Committee and will not be considered this year.

#### ARTIFICIAL REEFS

The Chairperson of the Department of Land and Natural Resources (DLNR) agreed to sign the application for the U. S. Army Corp of Engineers Permit to establish the Kalaeloa artificial reef off Ewa Beach, Oahu. The permitting process is estimated to take approximately 6-8 months. A new Environmental Assessment (EA) or Impact Statement (EIS) is required because the existing documents supporting this project are over 10 years old.

### 3. ECOSYSTEM & HABITAT

#### FISH AGGREGATION DEVICES (FADs)

The following describes activities during the period of October 2017 to January 2018:

During October 2017, two FADs were reported missing as detailed below:

U – Kaneohe Bay, Oahu (off-station off Hauula, Oahu on 10/4)

II – Haleiwa, Oahu (missing on 10/5)

During November 2017, one FAD was reported missing as detailed below:

KK – Kekaha, Kauai (missing on 11/14)

During December 2017, eight FADs were reported missing, one FAD replaced and one FAD was recovered as detailed below:

Z – Kipukai, Kauai (missing on 12/1)

AA – Port Allen, Kauai (missing on 12/1)

PP – Koloa, Kauai (missing on 12/1)

TT – Kanewaa Pt., Hawaii (missing on 12/5)

J – Waialeale, Oahu (missing 12/13)

MC – Palaoa, Lanai (missing 12/15)  
SO – Kealaikahiki, Kahoolawe (missing 12/15)  
X – Kahuku, Oahu (off-station off Ahukini, Kauai 12/15)  
T – Makapuu, Oahu (replaced on 12/10)  
U – Kaneohe Bay, Oahu (recovered off Hauula on 12/15)

No activity to report for January 2018.

Future plans in process are to replace FADs: F, B, NL, N, P, J, II, Z, PP, KK and ZZ (at its old location). Plans also include recovery of off-station FADs.

## COASTAL AREAS, REEFS

### U. S. Coral Reef Task Force (USCRTF)

The newly appointed Deputy Director of Coral Reef Conservation Program (CRCP), Harriett Nash visited Hawaii December 11 thru 15, 2017. She spent 3-days on Maui, touring the West Maui Watershed projects. DLNR is a partner along with other State, federal, and county agencies.

USCRTF 39<sup>th</sup> meeting was held in February, 2018 in Washington D.C.. Bruce Anderson, DAR Administrator, presented the State's Coral Reef Bleaching Recovery Plan during the business section of this meeting.

## CORAL REEFS ECOSYSTEM MANAGEMENT

### Analysis of Coral Reef Ecosystem Recovery and Change in West Hawaii

As mentioned in prior reports, West Hawaii suffered catastrophic coral cover loss (approximately 50 % on average across mid-depth zones) in the fall of 2015, with certain coral species losing > 90 % of their population. From July through October 2017, West Hawaii was under a NOAA Coral Bleaching Watch due to elevated and prolonged sea temperatures for the third consecutive summer. Fortunately, only minor coral bleaching and possible UV stress were observed. DAR Kona continued to evaluate the status of living corals and reef complexity at 25 permanent monitoring sites, and the most recent analysis (Spring 2017) found that slight coral recovery had occurred at 7 sites, slight continued coral decline had occurred at 13 sites, and no observable change in coral cover had occurred at 4 sites. Two substrate types favorable to coral recruitment (crustose coralline algae and light algal turf) replaced live coral cover at the majority of monitoring sites in West Hawaii, while macroalgal cover remained low. Spatial patterns of varying coral recovery and decline will be investigated in 2018.

#### Coral Recruitment Study, West Hawaii

A long-term Coral Recruitment Project has been studying juvenile coral recruitment in West Hawaii since 2004. DAR Kona recently completed another round of coral recruitment surveys at 9 sites, and nearshore reef fish surveys at 25 sites, allowing for continued evaluation of current management effectiveness. Several trends and patterns have emerged. Coral recruitment over time is very sporadic from year to year, which is not fully understood yet. However, summer months (March through August) consistently have higher recruitment rates than winter months (September through February) because most coral species spawn in late spring and early summer.

Recruitment in West Hawaii is also low compared to the rest of the main Hawaiian Islands. West Hawaii averages only 27 recruits/m<sup>2</sup>/year compared to 122 recruits/m<sup>2</sup>/year on Maui (Brown, 2004) and a high of 7,924 recruits/m<sup>2</sup>/year on Kauai (Friedlander and Brown, 2005). This low recruitment is most likely due to the narrow young reefs of Hawaii Island and the general leeward current north to the older islands. This sporadic and low recruitment rate means that resurgence from catastrophic events, like the 2015 bleaching event, will take a long time (e.g. decades). This is already showing up in the data with summer rounds in 2016 and 2017 having lower than average recruitment rates.

#### SUBSISTENCE & RECREATIONAL

##### Hawaii Marine Recreational Fishing Survey (HMRFS)

The HMRFS program continues to collect non-commercial fisheries data for the State of Hawaii. From October 2017 through January 2018, approximately 700 angler intercepts will be completed for both the shoreline and private boat modes from Kauai, Oahu, Maui, Molokai and Hawaii. The HMRFS staff continues to conduct surveys at a reduced rate due to part-time status (0.5 FTE). The MRIP Pacific Islands Regional Implementation Plan is currently under review by the MRIP operations team.

#### 4. OTHER ISSUES

##### STATISTICAL UNIT ACTIVITIES

##### Commercial Marine Licenses

On December 8, 2017, the Board of Land and Natural Resources approved to amend the Hawaii Administrative Rules to raise the Commercial Marine License fee from \$50 to \$100, and to establish deadline for primary fish dealers to submit the dealer purchase report to DLNR. This is the first Commercial Marine License fee increase since September 1999, and it provides much needed

revenue to cover operating expenses for the online licensing and fish report systems. DLNR-DAR implemented the licensee fee change on January 16, 2018. Primary dealers are required to submit fish purchases transacted during a week and report it to DLNR by the following Tuesday.

On September 6, 2017, the Supreme Court ruled that individuals who apply for the Commercial Aquarium Permit are required to comply with Hawaii Environmental Protection Act procedures. The Aquarium Permit allowed collectors to use fine meshed nets to harvest aquarium marine life for aquarium purposes. The case was remanded to the Circuit Court for further proceedings. On October 27, 2017, the Circuit Court further ruled that the Commercial Aquarium Permit is invalid and illegal.

DLNR-DAR was advised by the State Attorney General that statutory authority is required to issue commercial vessel licenses. During the current 2018 Legislative Session, S.B. No. 2847 was introduced to amend Section 189-2 of the Hawaii Revised Statutes on Commercial Marine License. This Bill attempted to add vessel as a subtype of the Commercial Marine License but was not heard by the Ways and Means Committee this year. So, it is effectively dead.

#### Commercial Fisheries Reports

The current 2017-2018 Deep 7 Bottomfish fishing year began on September 1, 2017 with an Annual Catch Limit (ACL) of 306,000 pounds. As of 2/9/18, 307 licensed bottomfishers made 1,464 trips and landed 165,184 pounds of Deep 7 bottomfish. This is 54.0% of the ACL.

The Circuit Court ruling to invalidate the Commercial Aquarium Permit removes the use of fine meshed nets from the commercial aquarium collector's fishing operation. As expected, the level of commercial aquarium harvests dropped off since November 2017.

In October 2017, system design specifications for the online fish dealer report system were delivered to the web portal developer, Hawaii Information Consortium (HIC). DLNR-DAR and WPacFIN met with HIC twice to discuss and clarify the system design specifications. HIC is expected to provide a statement of work to develop, test and implement the online dealer report system in February 2018.

#### AQUATIC INVASIVE SPECIES (AIS) MANAGEMENT

##### Kaneohe Bay AIS Control, Monitoring, and Restoration Efforts

Due to a natural decline in invasive algae in Kaneohe Bay that occurred in 2015,

no super sucker algae removal was conducted during this period. Ongoing invasive algae monitoring indicates that the target species (*Kappaphycus* spp. and *Eucheuma* spp.) have not rebounded significantly since the crash. Sea urchin biocontrol continues in the bay.

The AIS team in collaboration with the Hawaii Institute of Marine Biology participated in monitoring coral species and fish populations adjacent to the Heeia Fishpond. These surveys are assessing current mangrove removal efforts initiated by the areas new designation as a National Estuarine Research Reserve.

The AIS team continued monitoring a coral reattachment pilot project. The project is testing the efficacy of attaching broken coral fragments back onto the reef, and monitoring through both direct measurements of the corals and high resolution photomosaic imagery.

#### Coral Relocation Projects

The AIS team, in cooperation with the DAR Coral Nursery, relocated corals that were posing navigation hazards to vessels in both Waianae and Heeia Small Boat Harbors.

#### Kauai *Salvinia molesta* removal pilot project on the Kilauea River

DAR AIS staff conducted a pilot removal project to test *Salvinia molesta* control methods along the Kilauea River. *Salvinia* removal efforts included using the a mini-supersucker, hand removal, and rafting techniques. The supersucker proved effective in areas with a high *Salvinia* density and devoid of large California grass runners.

#### Japan Tsunami Marine Debris Response

DAR continues to log marine debris reports and suspected Japanese Tsunami Debris. The AIS team responded to one newly reported vessel along the West Shore of Oahu. Samples were collected and shipped for taxonomic identification.

#### Ballast Water

In coordination with Dr. Kim Peyton, DAR/DLNR built an operable multi-purpose laboratory used for macro- and micro-organism investigations. This laboratory is equipped with epifluorescence microscopy capabilities. DAR/DLNR now can better identify species in question.

An effort has been made to collaborate with Marisco's and Pacific Shipyards' representatives to minimize biosecurity risks associated with the arrival of their dry-dock and the heavy-lift ship that carries dry-docks from Asia to Hawaii.

The Ballast Check 2 verification study has been completed. The Ballast Check 2 is a rapid ballast water assessment tool, designed to measure ballast water compliance. DAR anticipates implementation in the near future.

DAR monitored water quality and plankton concentration in Honolulu Harbor, Kewalo Basin, and Rainbow Harbor on Oahu, in light of the pending amendment to Hawaii Administrative Rules (HAR) §13-76-19 related to inter-island management of ballast water discharge.

DAR also provided two introductory training sessions to USCG personnel on >50um Zooplankton and 10-50um Phytoplankton Enumeration and is looking forward to continued joint efforts.

#### STATE OF HAWAII LEGISLATIVE BILLS RELEVANT TO FISHERIES

The following is a summary of Legislative Bills relevant to fisheries management that are still alive during the 2018 Session:

House Bill (HB) 1751 would require the Department of Land and Natural Resources (DLNR) to establish a network of marine protected areas, which includes no-take areas and herbivore replenishment areas, in coastal fishing areas with the most critical fish depletion.

HB 1723 establishes a working group to identify high priority areas that are in need of marine protection management for potential designation as marine protected areas.

HB 2425 and SB 2847 are companion measures that would authorize DLNR to issue subtypes of commercial marine licenses for the taking of marine life. This would enable DLNR to establish an optional commercial marine vessel license, to make it easier for vessel operators to find crew for commercial fishing trips.

SB 2571 Bans the sale, offer of sale, or distribution in the State of any SPF sunscreen protection personal care product that contains oxybenzone or octinoxate, or both, without a medically-licensed prescription. Takes effect 1/1/2019.

SB 2079 would establish penalties and fines for any person who knowingly captures, kills, or takes any shark or ray within state marine waters and makes it a misdemeanor. This measure provides exemptions for native Hawaiian gathering rights and cultural practices, special activity permits, research purposes, and public safety.

SB 2848 would require that DLNR regulations related to bottomfishing are supported by peer-reviewed scientific evidence and the current status of stocks, indicating an environmental necessity for the regulation.

SB 2845 requires the office of planning, in coordination with the appropriate department agency, to prepare and periodically update a functional plan for seafood sustainability that expands the State's priority on food by including wild seafood as a viable food source.

The following bills were introduced but died through the hearings process:

HB 1752 and Senate Bill (SB) 2052 are two different measures that would establish a non-commercial marine fishing license requirement. DLNR would implement the program through administrative rulemaking, and license fees would be used for marine resource management.

HB 2382 and SB 2809 are companion measures that would transfer the statutory provisions of section 188-58.5, Hawaii Revised Statutes, that prohibit the taking or killing of female spiny lobsters, kona crabs, and samoan crabs, to administrative rules of DLNR. This would enable DLNR to better manage these species as new information becomes available.

SB 2867 would appropriate funds to establish two full-time fisheries technician IV positions and for operating expenses for a recreational fishing program at the Nuuanu Reservoir.

SB 2003 would restrict the commercial taking of aquatic life by any method to individuals who hold a valid aquarium fish permit and commercial marine license, and provides for the phasing out of commercial aquarium fish permits. It would also limit the taking of aquatic life for non-commercial purposes to five specimens per day. The intent of the bill is directed to address aquarium collection.